



## IR CL detector for SEM

SEM accessory specialist, KE Developments Ltd., new cathodoluminescence (CL) detector for IR detects signals over the range 800-1600 nm as required for the examination of semiconductor materials and devices in an SEM.

IR CL signals can arise from any semiconductor material when examined in the SEM and can provide information about local defects in crystalline structure or impurities often difficult to obtain by other techniques.

To illustrate the application the pair of photos shows firstly the backscattered electron image of GaAs diode (top) and the IR CL image (below).

The detector consists of

an elliptical mirror with an integral InGaAs photodiode and control electronics. The mirror has two focal points, with the specimen surface centred at one and the detector at the other.

The PD detector has a broadband spectral response characteristic over the specified wavelength range.

The detector assembly can be mounted on a retractable arm so that it can be conveniently moved out of the way when not in use.

The video output signal is generally linked directly into the SEM video display and the unit is compatible with most commercial SEMs.

## TZK 2000 chiller

Balzers has launched a new low-cost TZK 2000 turbo-pump chiller which provides "extremely high performance levels" and uses CFC-free coolant. It has a powerful circulation pump providing water flow of 20 l/min at 0.3 bar at 20°C at 24°C ambient with easy-to-read water level gauge.

## Sumitomo buys STS

Sumitomo Precision Products (SPP) has acquired the Wales-based Surface Technology Systems, a subsidiary of Electrotech, manufacturer of plasma processing equipment for R&D and pilot production. The sale was not unexpected because STS has been collaborating with SPP for some years and SPP is STS's Japan agent.

## MKS PPT Series

The new PPT Series of residual gas analyzers are controlled by PC-based software with the single electronics control unit mounted directly on the sensor flange. Mass range to 300 amu can be measured and it is available with a Faraday cup or dual Faraday electron multiplier detectors.

The PPT Series is now available in the UK from MKS Instruments UK Ltd. - the purpose-built lab in Altrincham provides RGA calibration traceable to national standards using the MKS Spinning Rotor Gauge.

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## UHV developments

Xtronix Ltd., Cham, Switzerland, has allied with the recently formed UHV precision machining group of the Johnsen Machine Co. will bring back to international markets an extensive range of UHV high precision manipulators and custom designed UHV systems earlier sold under the label of the former UHV Instruments Inc.

X-Tronix is a Swiss corporation founded in 1988 has a specific focus on UHV based techniques including thin films for customers worldwide. Johnsen Machine Co. (Ontario, Canada), is dedicated to the design and manufacture of precision mechanics including UHV manipulators etc, sold under the former "UHV Instruments Inc. (Buffalo, NY).

## IRCON uses InGaAs

The new Mirage MR-30 Series IR thermometer from IRCON (Niles, ILL, USA) employs an InGaAs 1.6 µm detector to provide accurate and reliable temperature measurements from 250 to 1400°C. The detector has inherent stability

allowing the MR-30 to be operated at high ambient temperature (60°C) without external cooling - applications include iron processing etc.

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